

# 6FV8A

## Medium-Mu Triode- Sharp-Cutoff Pentode

### 9-PIN MINIATURE TYPE

#### Electrical:

##### Heater Characteristics and Ratings:

Voltage (AC or DC) . . . . .	6.3 <sup>a</sup>	6.3 ± 0.6	volts
Current . . . . .	0.450 ± 0.030	0.450 <sup>b</sup>	amp
Warm-up time (Average) . . . . .	11	—	sec

##### Peak heater-cathode voltage (Each unit):

Heater negative with respect to cathode. . . 200 max. volts

Heater positive with respect to cathode. . . 200<sup>c</sup> max. volts

##### Direct Interelectrode Capacitances:

	<i>Without External Shield</i>	<i>With External Shield<sup>d</sup></i>	
<b>Triode Unit:</b>			
Grid to plate . . . . .	1.8	1.8	pf
Grid to cathode, pentode cathode & pentode No.3 & internal shield, and heater. . . . .	2.8	2.8	pf
Plate to cathode, pentode cathode & pentode grid No.3 & internal shield, and heater. . . . .	1.5	2	pf
<b>Pentode Unit:</b>			
Grid No.1 to plate. . . . .	0.02 max.	0.01 max.	pf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater. . . . .	5	5	pf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater. . . . .	2	3	pf
Pentode plate to triode plate . . . . .	0.15 max.	0.03 max.	pf

#### Characteristics, Class A<sub>1</sub> Amplifier:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Plate Voltage . . . . .	125	125	volts
Grid-No.2 Voltage . . . . .	—	125	volts
Grid-No.1 Voltage . . . . .	—1	—1	volt
Amplification Factor . . . . .	45	—	
Plate Resistance (Approx.) . . . . .	5600	200000	ohms
Transconductance . . . . .	8000	6500	μmhos
Plate Current . . . . .	12	12	ma
Grid-No.2 Current . . . . .	—	4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20 . . . . .	—7.5	—9	volts

#### Mechanical:

Operating Position . . . . .	Any
Maximum Overall Length . . . . .	2-3/16"
Maximum Seated Length . . . . .	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip) . . . . .	1-9/16" ± 3/32"
Diameter . . . . .	0.750" to 0.875"



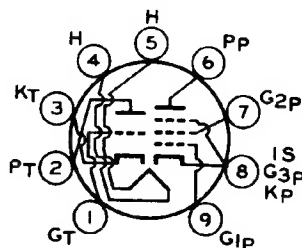
**RADIO CORPORATION OF AMERICA**  
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3-64

# 6FV8A

Dimensional Outline . . . . . See *General Section*  
 Bulb. . . . . T6-1/2  
 Base. . . . . Small-Button Noval 9-Pin (JEDEC No. E9-1)  
 Basing Designation for BOTTOM VIEW. . . . . 9FA

Pin 1-Triode Grid  
 Pin 2-Triode Plate  
 Pin 3-Triode Cathode  
 Pin 4-Heater  
 Pin 5-Heater  
 Pin 6-Pentode Plate  
 Pin 7-Pentode Grid No.2  
 Pin 8-Pentode Cathode, Grid No.3,  
     Internal Shield  
 Pin 9-Pentode Grid No.1



## AMPLIFIER — Class A<sub>1</sub> (Pentode Unit)

### Maximum Ratings, Design-Maximum Values:

Plate Voltage . . . . . 330 max. volts  
 Grid-No.2 (Screen-Grid) Supply Voltage. . . . . 330 max. volts  
 Grid-No.2 Voltage . . . . . See *Grid-No.2 Input*

*Rating Chart at front of Receiving Tube Section*

Grid-No.1 (Control-Grid) Voltage:  
 Positive-bias value . . . . . 0 max. volts  
 Grid-No.2 Input:

For grid-No.2 voltages up to 165 volts. . . . . 0.55 max. watt

For grid-No.2 voltages between

165 and 330 volts . . . . . See *Grid-No.2 Input*

*Rating Chart at front of Receiving Tube Section*

Plate Dissipation . . . . . 2.3 max. watts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation. . . . . 0.25 max. megohm

For cathode-bias operation. . . . . 1 max. megohm

## VERTICAL-DEFLECTION OSCILLATOR (Triode Unit)

### Maximum Ratings, Design-Maximum Values:

*For operation in a 525-line, 30-frame system<sup>e</sup>*

DC Plate Voltage. . . . . 330 max. volts

Peak Negative-Pulse Grid Voltage. . . . . 250 max. volts

Cathode Current:

Peak. . . . . 70 max. ma

Average . . . . . 20 max. ma

Plate Dissipation . . . . . 2 max. watts

### Maximum Circuit Values:

Grid-Circuit Resistance:

For cathode-bias operation. . . . . 3 max. megohms

<sup>a</sup> At heater amperes = 0.450.

<sup>b</sup> At heater volts = 6.3.

<sup>c</sup> The dc component must not exceed 100 volts.

<sup>d</sup> With external shield JEDEC No.315 connected to pin 4.

<sup>e</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

